Statement
of
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Mr. Chairman and Members of the Committee, I appreciate the opportunity to appear before you here today with Admiral Gehman, who along with the other members of the Columbia Accident Investigation Board (CAIB) has selflessly performed a valuable and patriotic public service these past seven months.

Shortly after the tragic loss of the Space Shuttle and its heroic crew, I made a solemn pledge to the families of Columbia's crew that we would find out what caused the loss of the Space Shuttle Columbia and its crew, correct what problems we find, and safely continue with the important work in space that motivates our astronauts and inspires millions throughout the world. Thanks to the CAIB's thorough report, we now definitively know what caused the accident. It was a combination of hardware, process and human failures. We also have a more complete understanding of the problems that must be fixed at NASA to ensure that Space Shuttle operations are conducted as safely as humanly possible in pursuit of our Nation's space exploration and research agenda.

The CAIB report provides NASA with a very detailed roadmap for returning to flight safely, one that we intend to faithfully follow. I can assure you that we will not only implement the CAIB's recommendations to the best of our ability, but we are also seeking ways to go beyond their recommendations.

Today's focus is on the hard lessons we've learned from the Columbia accident and about the hard work that lies ahead before we are ready to launch the Space Shuttle Atlantis for the STS-114 mission. I want to emphasize, as we undertake this work, we will be ever

mindful of and appreciative of the people who have helped NASA and our entire country recover from that terrible first day of February.

First and foremost, we owe enormous gratitude to the brave families of the Columbia crew. Through their steadfast courage and dignity they have provided inspiration to the Nation. A fitting memorial for the crew will be constructed at Arlington National Cemetery. We thank the members of this Committee for your strong support of the Columbia Orbiter Memorial Act, which President Bush signed into law on April 16, 2003.

One month ago, the family members demonstrated an incredible spirit of exploration and discovery in their own right as they joined astronaut Scott Parazynski in climbing to the top of the recently named Columbia Point, a prominent vista on Colorado's Kit Carson Mountain that now honors the memory of the Columbia STS-107 crew.

We are also indebted to the over 14,000 people from the Environmental Protection Agency, Federal Emergency Management Agency, the Federal Bureau of Investigation, Defense Department, U.S. Forest Service, the Texas and Louisiana National Guards and many state and local law enforcement and emergency service units who contributed to the recovery of Columbia's debris. As a result of this unprecedented interagency and intergovernmental cooperative effort, an area in eastern Texas and western Louisiana, about the size of Rhode Island, was carefully searched, resulting in the recovery of thirty-eight percent of the dry weight of the orbiter, including several key parts from the left wing, the part of the Orbiter damaged by a foam strike during liftoff, and the critical Orbiter Experimental Recorder—the data recorder that verified and validated much of what was learned about the accident. We are deeply saddened to note that one of the helicopters searching for debris from the Shuttle Columbia crashed in the Angelina National Forest in east Texas on March 27, claiming the lives of the pilot and a Forest Service Ranger. Our thoughts and prayers go out to the families of the helicopter crew members.

In support of this unprecedented operation, we received tremendous hospitality and support from the Texas communities of Lufkin, Hemphill, Nagadoches, Palestine and Corsicana, as well as the Louisiana communities of Shreveport and Leesville, particularly in support of activities at Barksdale AFB and Fort Polk. NASA vows not to forget the many kindnesses bestowed upon our people and the other recovery workers by all these communities. We will use the resources and people of our Education Enterprise to help nurture the spirit of discovery and exploration in the young people who grow up in the region, just as we are working to help inspire and motivate school children throughout the country as they embark on their studies this fall.

Finally, we are grateful for the diligent work of the Columbia Accident Investigation Board members and staff. As many of you know, the Board has worked non-stop since it was given this important responsibility. Admiral Gehman has performed many tremendous acts of public service throughout his distinguished career, and I'm certain

that the history books will regard his work on this report as among his most significant contributions to his country.

We accept the findings of the Board and will comply with its recommendations. The Columbia Accident Investigation Board's report recommendations will be our benchmark for Return to Flight. Using the Board's recommendations as NASA's organizing principles for emerging from the Columbia accident as a safer, stronger and smarter organization, we have developed a preliminary Return to Flight Implementation Plan which details the Agency's evolving blueprint for returning to flight safely and reliably. Released on September 8, this preliminary Implementation Plan provides an outline of how NASA will comply with the recommendations of the Columbia Accident Investigation Board, and also includes other corrective actions. The Implementation Plan is a living document and will be updated on a regular and frequent basis, with input from across the entire Agency.

Following the logic of the Board's report, the preliminary Implementation Plan focuses on making improvements in the following key areas:

- **Technical excellence –** Making specific technical engineering changes that will enhance our overall technical capabilities. Among these changes is the establishment of our new NASA Engineering and Safety Center at the Langley Research Center in Hampton, Virginia that will draw upon talent throughout our Agency to take a no holds barred approach to mission safety. If people in the center spot a problem or potential problem during their engineering and safety assessments of all our programs, they will be empowered to get the entire Agency, if necessary, focused on finding and implementing solutions.
- **Management --** Putting in place more effective management procedures, safeguards, and decision-making processes.
- **Organizational Culture --** NASA recognizes that prior to the Columbia, mission cultural traits and organizational practices within the Agency detrimental to safety were allowed to develop. We will now work diligently to develop an organizational culture that reflects the best characteristics of a learning organization, one based on clear and open communications throughout our Mission Teams, with a management culture that empowers both dialogue and achievement.

At the same time the CAIB was developing its report, NASA pursued an intensive, Agency-wide effort to identify additional actions that will further improve the Space Shuttle Program. We took a fresh look at all aspects of the Program, from technical requirements to management processes, and developed a set of internally-generated actions that complement and go well beyond the CAIB recommendations. For example, some of the types of activities we are focusing on include rudder speed brake actuator inspections and re-evaluation of catastrophic hazard analysis, to name a few.

The Implementation Plan integrates the CAIB recommendations as well as other actions. It is the first installment in a living document that will be periodically updated to reflect the progress toward safe return-to-flight and faithful implementation of the CAIB recommendations.

With respect to preliminary budget implications of the return-to-flight efforts, on September 4, 2003, NASA submitted to the Committee an update to the FY 2003 Operating Plan. This update reflects anticipated costs of about $40 million associated with implementation of an initial set of actions tied to the CAIB recommendations and other corrective actions. NASA is determining the full spectrum of recommended return to flight hardware and process changes, as well as their associated costs. The Administration is also assessing the long-term implications of the return-to-flight requirements. We will keep the Committee informed as decisions are made.

We are now determined to move forward with a careful, milestone-driven return to spaceflight activities, and to do so with the utmost concern for safety, incorporating all the lessons learned from the tragic events of February 1st. That's exactly what we will do.

Our Return to Flight effort involves a team of spaceflight professionals, led at NASA headquarters by Dr. Michael Greenfield, Associate Deputy Administrator for Technical Programs and veteran astronaut Bill Readdy, Associate Administrator for Space Flight.

Another veteran astronaut, Jim Halsell, who has flown on five Shuttle missions, will oversee the day-to-day work required for our return to flight. As the commander of an upcoming shuttle mission, STS-120, Jim has a personal interest in ensuring that Return to Flight is done right. I can assure you we will also rely on the advice and judgment of all members of the astronaut corps, the men and women who have the most vested interest in safe operations of the Shuttle program.

We will also have the benefit of the wisdom and guidance of a seasoned Return to Flight Task Group, led by two veteran astronauts, Apollo commander Thomas Stafford and Space Shuttle commander Richard Covey. Members of the Stafford-Covey Task Group were chosen from among leading industry, academia and government experts. The Members of the Task Group have knowledge and expertise in fields relevant to safety and space flight, as well as experience in leadership and management of complex programs. The diverse membership of the Task Group will carefully evaluate and publicly report on the progress of our response to implement the CAIB's recommendations.

There is another body that NASA will greatly rely on in the Return to Flight process: this committee, and all in Congress who have a vital interest in how NASA performs our work on behalf of the American public. We very much respect and value this Committee's oversight responsibility, and I personally look forward to working with the Committee in the weeks and months ahead to ensure that we do our job right.

Building upon work already underway to address issues previously identified by the CAIB, the release of our preliminary Implementation Plan marks an important step in our efforts to address and fix the problems that led to the Columbia accident. We are about to begin a new chapter in NASA history, one that will be marked by a renewed commitment to excellence in all aspects of our work, a strengthening of a safety ethos throughout our organization and an enhancement of our technical capabilities.

As we proceed along this path, all of us will be challenged. I am absolutely certain that the dedicated men and women of NASA are up to this challenge and we will not let the families of the Columbia astronauts and the American people down.

I would also like to provide an update on the status of the International Space Station (ISS) and the impact from grounding the Space Shuttle. The Space Shuttle's return to flight is critical to complete assembly and ensure research capability for the ISS. Only the Shuttle can deliver the large elements, spare parts and the logistics required to successfully meet our research goals and international agreements. While the Space Shuttle fleet is grounded as a result of the Columbia accident, Russian Soyuz and Progress vehicles continue to provide assured crew and cargo access to and from the ISS.

In the absence of Space Shuttle support, NASA and the International Partners are addressing contingency requirements for the ISS for the near- and long-term. In order to keep the Expedition 7 and future crews safe, we are ensuring that there are sufficient consumables, that the ISS can support the crew, and that there is a method for safe crew return available.

The ISS Expedition 7 crew (Yuri Malenchenko and Ed Lu) continue their stay on-board the ISS, which began in late April 2003. The ISS was re-supplied with a Progress vehicle (ISS Flight 12P) launched on August 28 and docked to the Station on August 30, 2003. The crew is continuing experiments for which sufficient hardware and supplies are already on board the ISS. Twenty-six science investigations are in process or planned for Increments 7 and 8. Operations continue to go well, with sufficient consumables on board the ISS. The launch of the next Progress to resupply the ISS has been accelerated from January 2004 to November 2003. I am proud that the ISS partnership has come together as a true partnership during this challenging time. I also wish to assure you that there is no schedule pressure to return the Space Shuttle to flight until we are confident it is safe to fly.

The Expedition 8 crew (Commander C. Michael Foale and Flight Engineer Alexander Kaleri) is scheduled to accept handover of the ISS from the Expedition 7 crew following their launch on Soyuz in October, 2003.

In closing, I want to reiterate that the country owes Admiral Gehman and the entire Board a tremendous debt of gratitude for the service it has performed. We embrace the CAIB report and we are committed to implementing the recommendations and safely returning to flight.

Finally, I believe it is important to note that all 13 CAIB members arrived at and agreed to the final conclusion of their report: "The United States should continue with a Human Space Flight Program consistent with the resolve voiced by President George W. Bush on February 1, 2003: 'Mankind is led into darkness beyond our world by the inspiration of discovery and the longing to understand. Our journey into space will go on.'"

Thank you again for the opportunity to appear before the Committee.